



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/585,511	07/10/2006	Morimasa Wada	062577	4164
38834 7590 03/12/2010 WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP 1250 CONNECTICUT AVENUE, NW SUITE 700 WASHINGTON, DC 20036				
EXAMINER				
WIECZOREK, MICHAEL P				
ART UNIT		PAPER NUMBER		
1792				
NOTIFICATION DATE		DELIVERY MODE		
03/12/2010		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentmail@whda.com

# Office Action Summary

## Application No.

10/585,511

## Applicant(s)

WADA ET AL.

## Examiner

Michael Wiczorek

## Art Unit

1792

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 21 December 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) 5-8 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 9-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/22)
- Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Status of Claims***

By amendment filed December 21, 2009, claims 9 through 11 are new. Claims 5 through 8 have been previously withdrawn as being related to non-elected inventions. Claims 1 through 11 are currently pending.

### ***Response to Arguments***

1. Applicant's arguments filed December 21, 2009 have been fully considered but they are not persuasive.
2. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).
3. As for applicant's arguments that the dry-stretching step of Nishida does not stretch a already stretched film, Nishida teaches that the stretch process of the taught invention may be conducted in multiple stages (Page 2 Paragraph 0022), thus Nishida does teach dry-stretch a film that has already been stretched.
4. As for arguments concerning the order of steps disclosed by Sugino, generally, no invention is involved in the broad concept of performing simultaneously operations which have previously been performed in sequence (*In re Tatincloux*, 108 USPQ 125). Furthermore, in general, the transposition of process steps or the splitting of one step into two, where the processes are substantially identical or equivalent in terms of function, manner and result, was

held to not patentably distinguish the process (*Ex parte Rubin*, 128 USPQ 440 (Bd. Pat. App. 1959)). Furthermore, as was disclosed above Nishida teaches that the stretching step may be conducted in multiple stages. Thus Sugino in view Nishida provide enough information to one of ordinary skill in the art to render claim 1 obvious.

5. Applicants new claims, however, do overcome the previously prior art, but are unconvincing in view of the newly cited art.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claim 9 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 9 discloses that in the drying step the film is conveyed with a tensile force of about 1.0. Though the specification recites that the film is conveyed with a tensile force and that the tensile force is such that it causes the film to be stretched about 1.0 to 1.3 times (Page 5 Paragraph 0018) nowhere in the specification is there a specific recitation that the tensile force has a measurement of about 1.0.

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

Art Unit: 1792

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

10. Claim 9 recites that during the drying step, the film is conveyed with a tensile force of about 1.0. The claim is indefinite because it is not clear which unit measurement is used for the about 1.0 of tensile strength. Furthermore, now tensile force unit is provided within the specification. Clarification on this issue is requested.

### *Claim Rejections - 35 USC § 103*

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

13. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugino et al (U.S. Patent No. 2002/0015807) in view of Nishida et al (U.S. Patent No. 2003/0062645).

Sugino teaches a method of forming a polarizing film used for LCDs comprising dyeing a polyvinyl alcohol (PVA) film followed by stretching then drying the film. Sugino further teaches that the formation steps may be conducted simultaneously and that there is no limitation on the order of the steps. (Page 1 Paragraph 0005).

Sugino does not teach that the drying is done while conveying the film with rolls or under a condition of there being a R/W ratio of 0.5 to 4.0.

Nishida teaches a method of manufacturing PVA polarizing films (Page 1 Paragraph 0002). Specifically Nishida teaches a drying step comprising heating and conveying the dyed film with three rollers where the L/W or R/W ratio is from 0.2 to 0.6 and where L is the distance between a pair of adjacent rolls and W is the initial width or width of an un-oriented/stretched film. Nishida further teaches that by having the rollers configured to have an R/W ratio of 0.2 to 0.6, necking of the polymer film during stretching is suppressed. (Page 1 Paragraphs 0006, 0009-0010, Pages 2-3 Paragraph 0026 and Figure 2).

At the time the present invention was made it would have been obvious to one of ordinary skill in the art that during the drying step the film would be conveyed by at least two rollers under the condition of having a R/W ratio of 0.5 to 4.0. One of ordinary skill in the art would have a reasonable expectation of success in using the drying method of Nishida in the polarizing film formation method of Sugino since the drying method of Nishida is a known drying/stretch method in the art for forming PVA polarizing films. Furthermore, as taught by Nishida, by drying/stretching the film when the R/W ratio is 0.2 to 0.6, necking of the polymer film during stretching can be prevented, thus it would have been obvious to dry/stretch the

polymer film of Sugino under the conditions of the R/W ratio being 0.2 to 0.6 as taught by Nishida.

As for the R/W ratio being 0.5 to 4.0, as was discussed above, Nishida teaches a R/W ratio of 0.2 to 0.6 which overlaps with the claimed range. Overlapping ranges are *prima facie* evidence of obviousness. I would have been obvious to one having ordinary skill in the art to have selected the portion of Nishida's R/W ratio range that corresponds to the claimed range. *In re Malagari*, 182 USPQ 549 (CCPA 1974)

As for claim 2, as was discussed above, the drying step of Nishida comprises three rolls (see Figure 2 of Nishida), where the distance L or R denotes a distance between at least one pair of the adjacent rolls selected from the three rolls.

As for claim 3, Neither Sugino nor Nishida teaches that during the drying step at least 50 of the film is dried under the condition of being conveyed by roller with a R/W ratio of 0.5 to 4.0, but the amount of drying of the film is a relevant process parameter for the drying method of Nishida in that the amount of film dried during the stretching step determines how long the heat treatment step conducted after stretching is done. It would have been obvious to one having ordinary skill in the art to have determined the optimum values of the relevant process parameters through routine experimentation in the absence of a showing of criticality. *In re Aller*, USPQ 233 (CCPA 1955)

It would have been obvious to one of ordinary skill in the art that by having more of the film dried during the stretching step of the drying step of Nishida, when the film is conveyed by rollers under a condition of having a R/W ratio of 0.2 to 0.6, the less time amount of time would

be needed during the subsequent heat treating step conducted after stretching to fully dry the film.

As for claim 4, Nishida teaches that the film is conveyed along the rollers by applying tension in a longitudinal uniaxial direction to cause stretching (Page 2 Paragraph 0022), thus the method of Nishida uses tensile force to convey the film along the rollers.

14. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugino et al in view of Nishida et al as applied to claim 1 above, and further in view of Tanaka et al (U.S. Patent # 5,071,906).

The teachings of Sugino in view of Nishida as they apply to claim 1 have been discussed previously. Neither Sugino nor Nishida specifically teach that during the drying step the film is conveyed with a tensile force of about 1.0.

Tanaka teaches an invention of producing a dyed and stretched polarizing film (Abstract). Tanaka teaches that the film is produced by dyeing and stretching the film (Column 5 Lines 55-60) which is then followed by a thermal treatment (Column 5 Lines 34-50). Tanaka further teaches that during thermal treatment sufficient tension is applied to the film in order to maintain the same length achieved after stretching and to avoid any looseness (Column 5 Lines 51-54). Thus Tanaka teaches that tensile force or tension is a cause effective variable because it affects looseness of the film as it travels through the manufacturing system during each treatment stage.

Thus it based on the teachings of Tanaka, it would have been obvious to one having ordinary skill in the art to have determined the optimum values of a cause effective variable such



as the tensile force through routine experimentation in the absence of a showing of criticality. *In re Woodruff*, 16 USPQ 2d 1934, 1936 (Fed. Cir. 1990).

As for claim 10, Sugino teaches wet stretching the film (Page 6 Paragraph 0062) and Nishida teaches that stretching may be conducted in multi stages (Page 2 Paragraph 0022) neither references teaches compatibility between utilizing a wet stretching process and a drying/stretching method.

Tanaka teaches utilizing both a wet stretching step followed by a drying/stretching step for the formation of a polarizing film (Column 6 Lines 59-65). Thus one of ordinary skill in the art would have a reasonable expectation step of performing the wet stretching step as taught by Sugino followed by the drying/stretching step as taught by Nishida.

15. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sugino et al in view of Nishida et al as applied to claim 1 above, and further in view of Kondo et al (U.S. Patent Publication No. 2002/0182427).

As was discussed above in the claim 1 rejection, Sugino teaches a method of forming a polarizing film used for LCDs comprising dyeing a polyvinyl alcohol (PVA) film followed by stretching then drying the film. Sugino further teaches that the formation steps may be conducted simultaneously and that there is no limitation on the order of the steps. (Page 1 Paragraph 0005).

Furthermore, in general, the transposition of process steps or the splitting of one step into two, where the processes are substantially identical or equivalent in terms of function, manner and result, was held to not patentably distinguish the processes. *Ex parte Rubin*, 128 USPQ 440 (Bd. Pat. App. 1959).

Furthermore as was discussed above Nishida teaches drying the films between two rolls wherein the R/W ratio is 0.2 to 0.6.

Neither Sugino nor Nishida teach that the drying is done while conveying the film with rolls or under a condition of there being a R/W ratio of 1.0 to 4.0.

Kondo teaches a method of manufacturing a polarizing film (Page 0002) where in the film is dyed (Page 3 Paragraph 0027) and then stretched and dried using heated rollers (Page 2 Paragraph 0019-0024). Kondo further teaches that the distance between rolls, and thus a ratio of distance between rolls and the initial width of the polymer film, is a cause effective variable because it affects the rate of strain applied to the film (Page 3 Paragraph 0026).

It would have been obvious to one having ordinary skill in the art to have determined the optimum value of a cause effective variable such as the distance between adjacent rolls, and thus the ratio of distance between adjacent rolls and the initial width of the film, through routine experimentation in the absence of a showing of criticality. *In re Woodruff*, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990).

Thus it would have been obvious to one having ordinary skill in the art to determine optimal values for the distance between adjacent rolls, thus determining optimal values for the R/W ratio, in order to provide sufficient rate of strain to the film as it is being processed.

Though Nishida teaches that some problems may arise, such as a tendency for the width of orientated film obtained to become narrower due to necking, when the R/W ratio (or L/W ratio as referred to as in Nishida) is above 0.6 (Page 1 Paragraph 0010), but as is discussed above, the distance between rolls is clearly a cause effective variable as taught by Kondo, and

thus it would have been obvious to one having ordinary skill in the art to have determined optimal values for the variable through routine experimentation.

### *Conclusion*

Claims 1 through 4 and 9 through 11 have been rejected. Claims 5 through 8 have been withdrawn from consideration as being non-elected inventions. No claims have been allowed.

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Wieczorek whose telephone number is (571)270-5341. The examiner can normally be reached on Monday through Friday, 7:30 AM to 5:00 PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Cleveland can be reached on (571)272-1418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael Wieczorek/  
Examiner, Art Unit 1792

/Michael Cleveland/  
Supervisory Patent Examiner, Art Unit 1792